

CLAIMS

1. Oil-guiding shaft (1, 8), with an inner shaft space (35) coaxial with or axis-parallel to the longitudinal axis (34) of the shaft and with means arranged in the inner shaft space (35) for dividing the said inner shaft space into at least two oil-guiding ducts separated from one another, characterized in that the ducts (3, 4, 5, 9, 10, 11, 12) are formed as ducts (3, 4, 5, 9, 10, 11, 12) which are open along their length in the inside wall (2) of the shaft (1, 8) and are separated from one another by a tube (6, 13) inserted into the inner space (35) of the shaft (35).

2. Shaft according to claim 1, characterized in that the open ducts (3, 4, 5, 9, 10, 11, 12) in the shaft (1, 8) are formed by bores with overlapping cross-sections.

3. Shaft according to claims 1 or 2, characterized in that the open ducts (3, 4, 5, 9, 10, 11, 12) are formed by means of a boring tool or by all-round press-forming the shaft (1, 8).

4. Shaft according to any of the preceding claims, characterized in that the open ducts (3, 4, 5, 9, 10, 11, 12) have a circular curved or groove-shaped cross-section geometry.

5. Shaft according to any of the preceding claims, characterized in that the open ducts (3, 4, 5, 9, 10, 11, 12) are arranged in the shaft (1, 8) in such manner that their longitudinal axes lie in one plane (36).

6. Shaft according to any of claims 1 to 4, characterized in that at least two of the open ducts (10, 11) are arranged relative to a further open duct (9) in such manner that their longitudinal axes do not lie in one plane.

7. Oil-guiding shaft (14), with a hollow-cylindrical inner shaft space (39) coaxial with or axis-parallel to the longitudinal axis (34) of the shaft and with means arranged in the inner shaft space into at least two oil-guiding ducts separated from one another, characterized in that a profiled tube (16, 27, 32) is arranged in the hollow-cylindrical inner shaft space (39), whose peripheral surfaces, where they

deviate from circular geometry, form the ducts (21 to 26, 28, 29 to 31) with the areas of the shaft's inside wall (15) opposite those surfaces.

8. Shaft according to at least one of the preceding claims, characterized in that in the shaft (1, 8, 14) at least one radial lubricant bore (7, 33) is formed, which leads from a lubricant source or from a lubricant consumer to the insert (6, 13, 16, 27, 32).

9. Shaft according to at least one of the preceding claims, characterized in that the insert (6, 13, 16, 27, 32) has on at least one of its ends a connection area (18, 19, 20, 21) by means of which the tube (6, 13, 16, 27, 32) is supported and/or mounted on the wall (2, 15) of the inner shaft space and which seals the ducts (3 to 5, 9 to 12, 21 to 26, 28, 29 to 31) from one another.

10. Shaft according to at least one of the preceding claims, characterized in that the insert (6, 13, 16, 27, 32) has a cylindrical, star-shaped, three-sided or rectangular cross-section geometry, with an at least partially circular outer periphery.

11. Shaft according to at least one of the preceding claims, characterized in that the insert (6, 13, 16, 27, 32) is formed as a hollow or solid section.

12. Shaft according to claim 11, characterized in that the inside space of the insert (6, 13, 16, 27) formed as a hollow section constitutes one of the ducts (4, 12, 23, 28).

13. Shaft according to at least one of the preceding claims, characterized in that the shaft (1, 8, 14) has bores (37, 38) extending radially to the ducts (3 to 5, 9 to 12, 21 to 26, 28, 29 to 31), through which a pressure medium can be fed to or can emerge from the ducts (3 to 5, 9 to 12, 21 to 26, 28, 29 to 31).